

5 CLAIMS

What is claimed is:

1. A method for increasing the capacity of insulin providing cells in an animal comprising
10 administering to said animal a therapeutically effective dose of at least one DP IV enzyme activity effector.
2. The method of claim 1 wherein said increasing the capacity of insulin producing cells
15 comprises causing endogenous insulin producing cells to become more effective insulin producers.
3. The method of claim 1 wherein said increasing the capacity of insulin producing cells comprises causing cells present in the pancreas to differentiate into insulin producing cells.
- 20 4. The method of claim 1 wherein said DP IV effector is selected from the group consisting of N-(N'-substituted glyceryl)-2-cyanopyrrolidines, N-aminoacyl thiazolidines, N-aminoacyl pyrrolidines: such as L-*threo*-isoleucyl thiazolidine (P32/98), L-*allo*-isoleucyl thiazolidine, L-*threo*-isoleucyl pyrrolidine, and L-*allo*-isoleucyl pyrrolidine and pharmaceutical salts thereof.
- 25 5. The method of claim 1 wherein said effector comprises a substrate capable of binding with said DP IV and which competes with naturally occurring substrates for DP IV.
6. The method of claim 1 wherein said administration comprises oral administration.
- 30 7. The method of claim 1 wherein said administration comprises *iv* or *im* injection.
8. The method of claim 1 wherein said administration comprises chronic oral administration.
- 35 9. The method of claim 1 wherein said administration comprises chronic *iv* or *im* injection.
10. The method of claim 1 further comprising the administration of glucose or the intake of food takes place before, during or after the administration of said DP IV activity effector.

- 5 11. The method of claim 8 wherein said administration of said DP IV activity effector occurs before said administration of glucose, or intake of food.